

Cosmic Ray Mini Experiments

Cosmic Ray flux:

- 1) Count the number of cosmic rays that are detected in one minute: _____
- 2) Predict: If you count cosmic rays for another minute will you get the same result? Why or why not?
- 3) Try it. Try it again. And again. Record your results below. Does this agree with your prediction from (2)?

Angle Dependence:

- 1) Predict: If you turn the detector on its side so that horizontally moving cosmic rays can pass through both paddles, will there be a change in the number of cosmic rays that are detected each minute? Why or why not?
- 3) Try it. Results: _____
- 4) Try tilting the detector at roughly a 45° angle. Results: _____

Outdoors:

- 1) Predict: If you count cosmic rays outdoors, will you get the same result as indoors? Why or why not?
- 2) Use an extension cord so that you can count cosmic rays outdoors. (You will have to find a socket that is reasonably close to a door or window.)
Results:

Other Experiments:

Think of some other experiments that might affect the count rate. If you have time, try them now. Otherwise, describe them below and we'll have time to try them after lunch.